## AMENDMENTS TO THE SPECIFICATION

IN THE SPECIFICATION:

*Please replace the paragraph beginning on page 1, line 11 with the following rewritten paragraph:*

Dynamic range of image sensor such as CCD used in an image pickup device such as widely prevailing digital cameras are generally narrower than those of film. Hence, in the case of imaging imaging a high luminance subject, the amount of received light exceeds the dynamic range. Then, the output of the image sensor saturates to cause the missing of the information of the subject imaged.

*Please replace the paragraph beginning on page 4, line 11 with the following rewritten paragraph:*

In another conventional technique described in JP-A-6-141229, the combination of two images is performed by converting each of the image signals obtained with low and high shutter through the same $\gamma$ characteristics and then additively combining the both signals that are each converted with $\gamma$ characteristics. However, since simple addition gives an image in which the middle tone region that is strongly influential on image quality appears unnatural, weighted addition depending on signal levels is usually carried out.

*Please replace the paragraph beginning on page 7, line 18 with the following rewritten paragraph:*

The invention provides ~~An~~ an image pickup apparatus for combining image data of a high output image and image data of a low output image, both of which are picked up by an imaging device, to produce combined image data has: a calculating unit for calculating a gain value for white balance adjustment from the image data of the high output image; a gain correcting unit for performing not only first white balance adjustment for the image data of the high output image with the gain value calculated by the calculating unit but also second white balance adjustment for the image data of the low output image with the gain value. According to the apparatus, it becomes possible to generate a combined image, which is natural, with least discrepancy in white balance and a broad dynamic range.

*Please replace the paragraph beginning on page 8, line 7 with the following rewritten paragraph:*

The invention provides ~~An~~ an image pickup apparatus for combining image data of a high output image and image data of a low output image, both of which are picked up by an imaging device, to produce combined image data has: a calculating unit for calculating a gain value for white balance adjustment from the image data of the high output image; a gain correcting unit for performing a white balance adjustment for the combined image data with the gain value calculated by the calculating unit. According to the apparatus, it also becomes possible to generate a combined image, which is natural, with least discrepancy in white balance and a broad dynamic range.

*Please replace the paragraph beginning on page 8, line 19 with the following rewritten paragraph:*

The invention provides ~~An~~ an image processing method of combining image data of a high output image and image data of a low output image, both of which are picked up by an imaging device, to produce combined image data has the step of: calculating a gain value used for first white balance adjustment for the image data of the high output image and second white balance adjustment for the image data of the low output image from the image data of the high output image. According to the method, it becomes possible to generate a combined image, which is natural, with least discrepancy in white balance and a broad dynamic range.

*Please replace the paragraph beginning on page 9, line 6 with the following rewritten paragraph:*

The invention provides ~~An~~ an image processing method of combining image data of a high output image and image data of a low output image, both of which are picked up by an imaging device, to produce combined image data has the step of: calculating a gain value used for a white balance adjustment for the combined image data from the image data of the high output image. According to the method, it also becomes possible to generate a combined image, which is natural, with least discrepancy in white balance and a broad dynamic range.

*Please replace the paragraph beginning on page 12, line 16 with the following rewritten paragraph:*

The invention provides ~~An~~ an image pickup apparatus for additively combining a low sensitivity image signal and a high sensitivity image signal to generate an image with broad dynamic range, has: first gamma correction means for performing gamma correction for the high sensitivity image signal with a first gamma character; second gamma correction means for performing gamma correction for the low sensitivity image signal with a second gamma character which is different from the first gamma character; and combining means for additively combining image signals output from the first gamma correction means and that image signals output from the second gamma correction means..

*Please replace the paragraphs beginning on page 55, line 21 with the following rewritten paragraphs:*

FIG. 17 is the block diagram for the gamma correction circuit ~~13~~ 53 and addition operation circuit ~~14~~44, both shown in FIG. 16. The gamma correction circuit ~~13~~ 53 has a first gamma correction circuit ~~13a~~53a, a second gamma correction circuit ~~13b~~53b, and a switching circuit ~~13c~~ 53c which takes in the output signal from the gain control circuit ~~12~~ 42 in FIG. 16 and outputs it to either of the gamma correction circuits ~~13a~~ 53a and ~~13b~~53b. The addition operation circuit ~~14~~ 44 additively combines the output signal of the first gamma correction circuit ~~13a~~ 53a and the output signal of the second gamma correction circuit ~~13b~~ 53b to output the combined signal to the subsequent RGB interpolating part ~~15~~45.

The signal charge detected by the low sensitivity pixel 2 and the signal charge detected by the high sensitivity pixel 3 are read from each pixel 1 in the dynamic range-expanded imaging apparatus, as distinguished each other. When an image signal read from the high sensitivity pixel 3 is inputted to the gamma correction circuit ~~13~~ 53 via the offset correction circuit ~~11~~ 41

and the gain control circuit ~~12~~42, the switching circuit ~~13c~~ 53c delivers this input signal to the first gamma correction circuit ~~13a~~53a. When an image signal read from the low sensitivity pixel 2 is inputted to the gamma correction circuit ~~13~~ 53 via the offset correction circuit ~~11~~ 41 and the gain control circuit ~~12~~42, the switching circuit ~~13c~~ 53c delivers this input signal to the second gamma correction circuit ~~13b~~53b.

In the operation of $\gamma$ conversion, an output signal is derived by raising the input signal value of the $\gamma$ power. The "$\gamma$" value used for the operation is not set at a constant value over the entire input signal range, but is generally modified "$\gamma$" value as the base by about 10% according to ranges. A table data of the first gamma character based on $\gamma$ =0.45 is set to the first gamma correction circuit ~~13a~~53a. A table data of the second gamma character based on $\gamma$ =0.18 is set to the second gamma correction circuit ~~13b~~53b.

In the dynamic range-expanded imaging apparatus, the image signal read from the high sensitivity pixel 3 is subjected to the $\gamma$ -conversion with "$\gamma$" value of about 0.45 executed by the first gamma correction circuit ~~13a~~ 53a to output to the addition operation circuit ~~14~~44. On the other hand, the image signal read from the low sensitivity pixel 2 is subjected to the $\gamma$ -conversion with "$\gamma$" value of about 0.18 executed by the second gamma correction circuit ~~13bto~~ 53b to output to the addition operation circuit ~~14~~44.

The addition operation circuit ~~14~~ 44 executes the addition operation of the image signal-, which was $\gamma$ converted by the first gamma correction circuit ~~13a~~53a, from the high sensitivity pixel 3 and the image signal , which was $\gamma$ converted by the second gamma correction circuit ~~13b~~53b, from the low sensitivity pixel 2 on pixel-by-pixel basis, and then outputs.